



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,413	11/28/2003	Masatsugu Iribe	245938US6	7405
22850	7590	11/16/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			MCLOUD, RENATA D	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/722,413	IRIBE ET AL.	
	Examiner Renata McCloud	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 August 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 8-25 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-7,26-32 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION*****Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-7, 26-32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification, while being enabling for the coil terminals being open-circuited when a low level control signal is received and the coil terminals being short circuited when a high level control signal is received, does not reasonably provide enablement for (a) the coil terminals being open-circuited when a high level control signal is received and (b) the coil terminals being short circuited when a low level control signal is received.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1,2,26,27 rejected under 35 U.S.C. 102(b) as being anticipated by Besson et al (US4633156).

**Claims 1,26:** a controller comprising switching means for switching between an on-state and an off-state in which the coils are open-circuited when a high level signal is received, and

Art Unit: 2837

between an on-state and a second off-state in which the coils are short circuited when a low level signal is received (col. 5:15-29); and current control means (2) for controlling the switching (col. 4:49-68).

**Claims 2,27:** the switching means comprises a first transistor switch set (T1, T3) for connecting the coil (7a) to the power supply (V+), and a second transistor set (T2, T4) for connecting the coils to ground (ground).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-7,28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besson et al in view of Chambers et al (US6469469).

**Claims 3,28:** Besson et al teach the limitations of claims 2 and 27. Referring to claims 3 and 4, they do not teach pwm control. Chambers teaches switching between open circuits and closed circuits and the control means switches with PWM (fig. 2; col. 10:63-11:7, 22:33-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Besson et al to use pwm as taught by Chambers in order to control the motor.

**Claims 4, 29:** Besson et al teach the limitations of claims 1 and 26. Referring to claims 4 and 29, they teach a motor having a resistance (abstract). They do not teach the coil current control means controls the motor to have viscosity resistance by adjusting the ratio of the first and second off states during a period when no current is supplied. Chambers et al teach the coil

Art Unit: 2837

current control means controls the motor to have viscosity resistance by adjusting the ratio of the first and second off states during a period when no current is supplied (col. 7:50-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Besson et al to adjust the resistance as taught by Chambers in order to control the motor.

**Claims 5,30:** Besson et al and Chambers et al teach the limitations of claims 4 and 29.

Referring to claims 5 and 30, Chambers et al teach the control means controls the ratio of the first and second off state during a periods where not current is supplied to the coils with PWM (col. 7:50-67; fig. 2).

**Claims 6,31:** Besson et al and Chambers et al teach the limitations of claims 4 and 29.

Referring to claims 6 and 31, Chambers et al teach the control means increases the first off state as to the off state of the coil in order to increase the mechanical compliance of the motor (col. 7:50-67).

**Claims 7,32:** Besson et al and Chambers et al teach the limitations of claims 4 and 29.

Referring to claims 7 and 32, Chambers et al teach the control means increases the first off state as to the off state of the coil in order to increase the viscosity resistance of the motor (col. 7:50-67).

#### *Response to Arguments*

7. Applicant's arguments with respect to claims 1-7,26-32 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2837

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Renata McCloud whose telephone number is (571) 272-2069. The examiner can normally be reached on Mon.- Fri. from 5:30 am - 2pm.

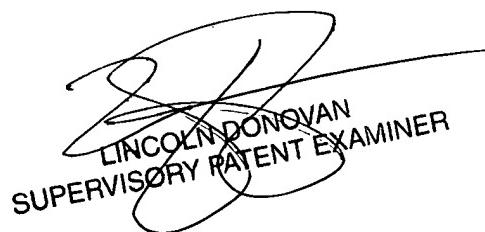
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2837

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Renata McCloud  
Examiner  
Art Unit 2837

rdm



LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "L.D." followed by a stylized surname. Below the signature, the words "SUPERVISORY PATENT EXAMINER" are printed in a smaller, sans-serif font.